This first action on the merits is responsive to the remarks and amendments received 20 June 2011. Claims 16-30 are pending. Claim 16 is amended.

DETAILED ACTION

Response to Amendment

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claim16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 3,755,249 to Fujita et al. (hereafter '249).

3. Regarding claim 16, '249 teaches a process for the manufacture of nonwoven surfaces by direct melt spinning of filaments of a composition based on thermoplastic polymers comprising the steps of: a) feeding the composition to a plurality of spinnerets each comprising several spinning orifices (C8L60), b) feeding the filaments to a pneumatic attenuation device (C9L20) and a stage in which the filaments obtained are formed into a sheet (C3L50), wherein the composition based on thermoplastic polymers comprises a polymeric matrix and/or a modifying polymeric additive comprising repeat units corresponding to the following general formulae: I, II, III, IV in which: R1, R2, R3 and R4, which are identical or different, represent aliphatic, cycloaliphatic or aromatic hydrocarbon chains comprising from 2 to 18 carbon atoms, R5 represents a polyether radical with a molecular weight of between 400 and 200 000, A and B represent the CO,

NH or O groups ; when A represents CO, B represents NH or O and vice versa, With the further proviso that the polymeric matrix comprises at least one of the repeat units I or II and at least one of the repeat units III or IV when the additive is absent or does not comprise repeat units of formulae III or IV (C4L22).

4. '249 teaches all of the claimed limitations save for the number of carbon atoms in the carbon chain. It would have been obvious to the artisan of ordinary skill in the art to modify the prior art range of 10-30 atoms (C4L26) to the claimed range since it has been held that where the claimed ranges overlap or lie within the prior art disclosure a *prima facie* case of obviousness exists. One of ordinary skill would have been motivated to alter the prior art range for the benefit of adjusting the size of the polyamide moiety.

5. Regarding claim 17, '249 teaches the process wherein the modifying polymeric additive is present in the composition at a concentration by weight of between 1% and 30% of the total composition (ABSTRACT).

6. '249 teaches all of the claimed limitations save for the additive concentration. It would have been obvious to the artisan of ordinary skill in the art to modify the prior art range of 1-30% by weight (ABSTRACT) to the claimed range since it has been held that where the claimed ranges overlap or lie within the prior art disclosure a *prima facie* case of obviousness exists. One of ordinary skill would have been motivated to alter the prior art range for the benefit of adjusting the antistatic propensity of the final fibers.

7. Regarding claim 18, '249 teaches the process wherein the modifying polymeric additive is present in the composition at a concentration by weight of between 1% and 15% of the total composition (ABSTRACT).

8. Claim19, 20, 22-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over ‘249 as applied to claim 16 above, and further in view of U.S. Patent Application Publication 2004/0242788 to La Grande et al. (04/788 hereafter).

9. Regarding claim 19, the previous art combination does not teach claimed additive monomer precursors.

10. In the same field of endeavor, polyamide yarn manufacture, 04/788 teaches a modifying polymeric additive obtained by polymerization of the following monomers: V, VI, VII and VIII in which RI, R2 and R3, which are identical or different, represent aliphatic, cycloaliphatic or aromatic hydrocarbon chains comprising from 2 to 18 carbon atoms, R5 represents a polyether radical with a molecular weight of between 400 and 200 000, B represents the COOH, NH2 or OH functional groups, in the presence of a monofunctional chain-limiting compound (0038-0039) for the benefit of making a more workable thermoplastic. It would have been obvious to a person of ordinary skill in the art at the time of invention to combine the teachings of ‘249 with those of 04/788 for the benefit of improving the workability of the thermoplastic.

11. Regarding claim 20, ‘249 does not teach a chain limiting group.

12. In the same field of endeavor, 04/788 teaches the process wherein the chain limiting agent is selected from the group consisting of monofunctional amines (0052) for the benefit of terminating the chain. It would have been obvious to a person of ordinary skill in the art at the time of invention to combine the teachings of ‘249 with those of 04/788 for the benefit of improving the workability of the thermoplastic.

13. Regarding claim 22, the previous art combination discloses the claimed invention concentration except for the concentration. It would have been obvious to modify the prior art since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering optimal or workable ranges of a result effective variable involves only routine skill in the art. One would have been motivated to select the claimed concentration of formula VIII for the benefit of lengthening the chain.

14. Regarding claim 23, '249 teaches the process wherein the modifying polymeric additive comprises: at least one thermoplastic block (C2L45) and at least one polyoxyalkylene block (C1L30).

15. Regarding claim 24, '249 does not discuss star or "H" shaped chains.

16. In the same field of endeavor, 04/788 teaches the process wherein the modifying polymeric additive comprises: at least one thermoplastic polymer block formed by: a star or H macromolecular chain comprising at least one polyfunctional core and at least one branch or one segment of thermoplastic polymer connected to the core, the core comprising at least three identical reactive functional groups, and/or a linear macromolecular chain comprising a difunctional core and at least one segment of thermoplastic polymer connected to the core, and at least one polyoxyalkylene block connected to at least a portion of the reactive ends of the thermoplastic polymer block (0057) for the benefit of improving the workability of the plastic. It would have been obvious to a person of ordinary skill in the art at the time of invention to combine the teachings of '249 with those of 04/788 for the benefit of improving the workability of the plastic.

17. Regarding claim 25, ‘249 does not teach star or “H” chains.

18. In the same field of endeavor, 04/788 teaches the process according wherein the bonding between the thermoplastic polymer blocks are: at least one free end of the star or H macromolecular chain, chosen from the thermoplastic polymer branch or segment ends and the ends of the polyfunctional core, is connected to a poly(alkylene oxide) block, and/or at least one free end of the linear macromolecular chain, chosen from the thermoplastic polymer segment ends and the ends of the difunctional core, is connected to a poly(alkylene oxide) block; the two free ends of the linear macromolecular chain being connected to poly(alkylene oxide) blocks when the thermoplastic polymer block comprises macromolecular chains solely of linear type (0057) for the benefit of improving the workability of the plastic. It would have been obvious to a person of ordinary skill in the art at the time of invention to combine the teachings of ‘249 with those of 04/788 for the benefit of improving the workability of the plastic.

19. Regarding claim 26, ‘249 does not teach star polyamides.

20. In the same field of endeavor, 04/788 teaches the process according to Claim 25, wherein the star macromolecular chain is a star polyamide obtained by copolymerization from a mixture of monomers comprising: a polyfunctional compound comprising at least three identical reactive functional groups being an amine functional group or a carboxylic acid functional group, monomers of following general formulae (Xa) and/or (Xb) (0094) and optionally, monomers of following general formula (IX) in which: Z represents a functional group identical to the reactive functional groups of the polyfunctional compound, Rl2 and R6 represent identical or different, substituted or

unsubstituted, aliphatic, cycloaliphatic or aromatic hydrocarbon radicals which have from 2 to 20 carbon atoms and optionally having heteroatoms, Y is a primary amine functional group when X represents a carboxylic acid functional group, or Y is a carboxylic acid functional group when X represents a primary amine functional group (0094)) for the benefit of improving the workability of the plastic. It would have been obvious to a person of ordinary skill in the art at the time of invention to combine the teachings of '249 with those of 04/788 for the benefit of improving the workability of the plastic.

21. Regarding claim 27, the previous art combination discloses the claimed invention concentration except for the concentration. It would have been obvious to modify the prior art since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering optimal or workable ranges of a result effective variable involves only routine skill in the art. One would have been motivated to select the claimed concentration of formula III and/or IV for the benefit of lengthening the chain.

22. Regarding claim 28, '249 does not teach lactams or diacid monomers

23. In the same field of endeavor, 04/788 teaches wherein the repeat units of formula III and/or IV originate from the reaction between a polyoxyalkylene monomer comprising two reactive terminal functional groups with a diacid monomer or a lactam (0006) for the benefit of improving the workability of the plastic. It would have been obvious to a person of ordinary skill in the art at the time of invention to combine the teachings of '249 with those of 04/788 for the benefit of improving the workability of the plastic.

24. Regarding claim 29, '249 teaches the process wherein the repeat unit of formula I is obtained by reaction between a diacid selected from the group consisting of succinic acid, adipic acid, terephthalic acid, isophthalic acid, dodecanedioic acid and their mixtures and a diamine selected from the group consisting of hexamethylenediamine, 2-methylpentamethylenediamine and meta- xylylenediamine (C3L55-C4L10).

25. Regarding claim 30, '249 does not teach the claimed group.

26. In the same field of endeavor, 04/788 teaches the process wherein the repeat unit of formula II is obtained by polycondensation of lactams or amino acids selected from the group consisting of caprolactam, aminoundecanoic acid and aminododecanoic acid (0006) for the benefit of improving the workability of the plastic. It would have been obvious to a person of ordinary skill in the art at the time of invention to combine the teachings of '249 with those of 04/788 for the benefit of improving the workability of the plastic.

27. Claim 21 rejected under 35 U.S.C. 103(a) as being unpatentable over '249 in view of 04/788 as applied to claim 20 above, and further in view of U.S. Patent 5,959,069 to Gluck et al. ('069 hereafter).

28. Regarding claim 21, the previous art combination does not teach the claimed species.

29. In the same field of endeavor, '069 teaches the process wherein the monofunctional compounds is acetic acid, propionic acid, or benzylamine (C4L10-C4L20) for the benefit of terminating the chain. It would have been obvious to a person

of ordinary skill in the art at the time of invention to combine the teachings of '249 with those of 04/788 for the benefit of improving the workability of the thermoplastic.

Response to Arguments

30. Applicant has advanced several arguments in support of the patentability of the instant application. They are:

a. There is no suggestion or motivation in Fujita to modify the reference by replacing an additive comprising the specific secondary alkyamines and the specific tertiary amines as an additive with a poly(oxyalkylene)amide or a polymeric matrix comprising poly(oxyalkylene)units.

b. There is no suggestion or motivation in Fujita to modify the process to feed the filaments into a pneumatic attenuation device in which the filaments can adhere to the wall of the attenuation device or other filaments.

c. La Grande does not teach that the polymer must have a high electrical conductivity as required by the instant specification.

31. Regarding the first argument, the applied reference teaches the process as claimed. Applicant is advised that care should be taken when employing alternative language in claims, since the claim may encompass broader subject matter than intended. This argument is not persuasive.

32. The final clause of applicant's claim 16 reads as follows (highlighting by examiner):

> "…with the proviso that the polymeric matrix **comprises at least one of the repeat units I or II** and at least one of the repeat units III or IV when

the additive is absent **or does not comprise repeat units of formulae III or IV**.

33. As written, the examiner has interpreted this clause to mean that the claim requires one of the repeat units I or II while making optional the inclusion of repeat units III or IV.

34. Regarding the second argument, Fujita teaches a 'pneumatic attenuation device' (see C9L20). The further limitations argued are not claimed. This argument is not persuasive.

35. Regarding the third argument, this subject matter is not claimed. This argument is not persuasive.

Conclusion

36. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHN ROBITAILLE whose telephone number is (571)270-7006. The examiner can normally be reached on Monday to Thursday from 8:00 AM to 4:00 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yogendra Gupta can be reached on (571) 272-1316. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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JPR